

In the Claims

Please replace all prior versions, and listings, of claims in the application with the following list of claims:

1. (Currently Amended) A suturing instrument ~~for joining a first portion of material to a second portion of material, said suturing instrument comprising:~~

. a handle;

~~an end effector mounted on said handle and defining therein:~~

a shaft having a proximal end and a distal end with an opening, a first island and a second island;

a first channel adapted to guide suture wire toward the opening and having a curved portion adapted for supporting suture wire, said first channel being curved to impart a looping configuration bend to portions of the suture wire passed therethrough such that the suture wire begins to form a wire loop suture upon exiting the opening;

a second channel adapted to receive the looped suture wire after the suture wire has exited the opening; emerged from said first channel; and

a passageway for supporting a cutting bar, said passageway intersecting said first channel so as to create a first island between said first channel and said passageway, and said passageway intersecting said second channel so as to create a second island between said second channel and said passageway;

a wire advancing actuator mounted on said handle for moving drive adapted to move the suture wire through said in the first channel and [[,]] through the material to be sutured first and second portions and back into said second channel; and

a cutter cutting bar movably disposed in said passageway for selectively engaging the suture wire, said cutting bar being adapted to (1) cut the looped suture wire so as to free the wire loop suture from suture wire remaining in the instrument from the remaining portions of the suture wire; (2) and bend the trailing end and the leading each end of the looped suture wire loop suture around one of the said first island and said the second island; and (3) lift the looped suture wire over said first island and said second island; and

~~a cutting bar actuator mounted on said handle for moving the cutting bar into engagement with the suture wire.~~

2. (Currently Amended) A suturing instrument according to claim 1 wherein ~~said cutting bar~~ the cutter is further adapted to direct the wire loop suture away from the first and second channels in a lateral direction ~~push the looped suture wire past said first island and said second island after the looped suture wire has been lifted.~~

3. (Currently Amended) A suturing instrument according to claim 1 wherein ~~said the second channel~~ includes a curved surface ~~for guiding~~ adapted to contact the looped suture wire ~~emerged from said first channel.~~

4. (Currently Amended) A suturing instrument according to claim 1 wherein the distal end includes a recess adapted to receive the material to be sutured ~~said end effector is provided with a recessed cutout therein such that pressing said end effector against a pliable portion of material causes the bulging portion of material into the recessed cutout, to permit deep penetration of the suture wire.~~

5. (Currently Amended) A suturing instrument according to claim 1 wherein ~~said end effector~~ the distal end includes at least one projection ~~extending out of said end effector for engaging the portion of~~ adapted to engage the material to be sutured.

6. (Currently Amended) A suturing instrument according to claim 5 wherein ~~said the distal end effector~~ includes two projections ~~extending out of said end effector away from the distal end and adapted to engage~~ for engaging the portion of material to be sutured.

7. (Currently Amended) A suturing instrument according to claim 6 wherein one of ~~said the~~ projections is longer than ~~the other~~ another of ~~said the~~ projections.

8. (Currently Amended) A suturing instrument according to claim 1 [[10]] wherein ~~said cutting bar~~ the cutter comprises (1) ~~a cutting face for cutting~~ adapted to cut the looped suture

~~wire from the remaining portions of the suture wire; (2)-a relief face for bending the trailing end adapted to bend each end of the wire loop suture around one of the first island and the second island and the leading end of the looped suture wire around said first island and said second island; and (3)-an ejection ramp face for lifting adapted to the looped suture direct the wire loop suture away from the first and second channels in a lateral direction over said first island and said second island.~~

9. (Currently Amended) A suturing instrument according to claim 8 wherein said ~~cutting bar further comprises the cutter includes~~ an ejection push face adapted to push the looped suture-wire loop suture distally past said first island and said second island after the looped suture-wire loop suture has been directed away from the first and second channels ~~lifted over said first island and said second island.~~

10. (Currently Amended) A suturing instrument according to claim 1 wherein the material to be sutured includes tissue ~~said first portion of material comprises tissue and said second portion of material comprises tissue.~~

11. (Currently Amended) A suturing instrument according to claim 1 wherein the material to be sutured includes both mesh and tissue ~~said first portion of material comprises a prosthesis and said second portion of material comprises tissue.~~

12. (Canceled)

13. (Currently Amended) A suturing instrument according to claim 1 further comprising:

a passageway that provides a pathway for the cutter, the passageway disposed between the wherein said first island and said the second island, wherein the first and the second islands are each separated from said the passageway by at least a distance equal to a width of the suture wire the thickness of the suture wire.

14. (Currently Amended) A suturing instrument according to claim 1 wherein ~~said~~the first channel and ~~said~~the second channel are undercut so as to help retain the suture wire in ~~said~~the first channel and ~~said~~the second channel, respectively.

15. (Currently Amended) A suturing instrument according to claim 1 wherein ~~said~~the wire ~~advancing actuator~~drive is adapted to advance a predetermined length of suture wire.

16. (Currently Amended) A suturing instrument according to claim 1 wherein ~~said~~the wire ~~advancing actuator~~drive and ~~said cutting bar actuator~~the cutter are sequentially activated by a single element.

17. (Currently Amended) A suturing instrument according to claim 1 wherein ~~said~~the second channel has a geometry ~~such that~~adapted to retain the suture wire ~~is maintained in said second channel~~therein until after the suture wire has been cut and partially bent.

18. (Currently Amended) A suturing instrument according to claim 1 wherein ~~said~~the ~~cutting bar~~cutter cuts the suture wire so as to form a sharp point.

19. (Currently Amended) A suturing instrument according to claim 1 wherein ~~said~~the ~~end effector~~shaft is detachable from ~~said~~the handle so as to allow a different ~~end effector~~shaft to be mounted to ~~said~~the handle.

20. (Currently Amended) A suturing instrument according to claim 1 further comprising:
a wire supply cartridge ~~for housing, dispensing and supporting~~adapted to store the suture wire being ~~advanced~~provided to said first channel.

21. (Canceled)

22. (Currently amended) A method of suturing for joining a first portion of material to a second portion of material, ~~said method~~ comprising:

providing a suturing instrument comprising:

- a handle;
- ~~an end effector mounted on said handle and defining therein:~~
- a shaft having a proximal end and a distal end with an opening, a first island and a second island;
- a first channel adapted to guide suture wire toward the opening and having a curved portion adapted for supporting suture wire, said first channel being curved to impart a looping configuration bend to portions of the suture wire passed therethrough such that the suture wire begins to form a wire loop suture upon exiting the opening;
- a second channel adapted to receive the looped suture wire after the suture wire has exited the opening; ~~emerged from said first channel;~~ and
- ~~a passageway for supporting a cutting bar, said passageway intersecting said first channel so as to create a first island between said first channel and said passageway, and said passageway intersecting said second channel so as to create a second island between said second channel and said passageway;~~
- a wire advancing actuator mounted on said handle for moving drive adapted to move the suture wire through said in the first channel and [[,]] through the material to be sutured first and second portions and back into said second channel; and
- a cutter cutting bar movably disposed in said passageway for selectively engaging the suture wire, ~~said cutting bar being adapted to (1) cut the looped suture wire so as to free the wire loop suture from suture wire remaining in the instrument from the remaining portions of the suture wire; (2) and bend the trailing end and the leading each end of the looped suture wire loop suture around one of the said first island and said the second island; and (3) lift the looped suture wire over said first island and said second island; and~~
- ~~a cutting bar actuator mounted on said handle for moving the cutting bar into engagement with the suture wire;~~
- positioning the distal end adjacent the material to be sutured~~said end effector against at least one of the portions to be joined;~~
- moving the suture wire through ~~said the~~ first channel, through the material ~~first and second portions and back into said the~~ second channel; and

moving the ~~cutting bar in said passageway cutter~~ so as to ~~(1) cut the looped suture wire from the remaining portions of the suture wire; (2) bend the trailing end of the looped suture wire around said first island and said second island; and (3) lift the looped suture wire over said first island and said second island;~~ cut the suture wire to free the wire loop suture from suture wire remaining in the instrument and bend each end of the wire loop suture around one of the first island and the second island.

23. - 37. (Canceled)

38. (New) A method of forming a wire loop suture, the method comprising:
driving deformable suture wire through a curved portion of a first channel of a suturing instrument;

bending the suture wire in the curved portion such that upon exiting a distal end of the instrument a leading end of the suture wire initially moves away from the distal end and follows a curved trajectory to return to the distal end to form the wire loop suture;

receiving the leading end in a second channel at the distal end as the suture wire returns thereto;

cutting the suture wire to separate a trailing end of the wire loop suture from suture wire remaining in the suturing instrument; and

bending the trailing end and the leading end inward toward a center of the wire loop suture.